

## REMARKS

Claims 1-20 are pending in the application. This preliminary amendment is directed to the rejections set forth by the Examiner in the December 2, 2002 Office Action of U.S. Patent Application Serial Number 09/629,258, the application from which the present application claims priority. The rejections are respectfully traversed, and detailed arguments are set forth below.

### Amendments to Application

Applicants would like to note that the claims in the specification filed herewith have been amended from those pending at the time of the Examiner prepared the December 2, 2002 Office Action. Further, the specification and drawings have been amended to be consistent. No new matter has been added.

The term “minimally inductive” (added to claims 1, 11, and 16) is inherent because the electrical contact mechanism disclosed in the original specification, by its very structure would be minimally inductive, and that quality would be so recognized by persons of ordinary skill. In addition to being inherent in the original specification, in the Background section of the original application prior art references are distinguished because they do not disclose “a solution for modern complicated test probes that include expensive electronics and must have *little or no inductance* or capacitance” (emphasis added). The Brief Summary of the Invention also has been amended to emphasize this feature. Specifically, the following sentence has been added: “Unlike the prior art, the present invention provides a solution for modern complicated test probes that include expensive electronics and must have little or no inductance or capacitance.” Finally, the original disclosure gave examples of “a signal spring contact, a leaf spring, a pogo pin, or a coil spring” (page 4, lines 22-23), all of which having the characteristic of being minimally inductive.

The term “directly” (added to claims 1 and 11) is explicit because FIGS. 2 and 6 specifically show the electrical contact mechanism directly electrically coupled to the electronics.

The term “high bandwidth” (added to claims 1 and 11) is inherent because the cartridge system disclosed in the original specification, by its very structure would be suitable for high bandwidth applications, and that quality would be so recognized by persons of ordinary skill.

35 U.S.C. Section 102(e)

Applicants would like to reiterate that U.S. Patent No. 6,466,000 to Nightingale (the “Nightingale ‘000 reference”) should not be considered prior art under 35 U.S.C. Section 102(e) based on its priority date of May 31, 2000 (the filing of its provisional application). Although 35 U.S.C. Section 102(e) was amended so that the prior art date would be the provisional application filing date (assuming that there was an enabling disclosure and adequate written description provided in the provisional application, a fact of which applicants have no knowledge as they have not seen the provisional application), applicants submit that the Nightingale ‘000 reference is not prior art under 35 U.S.C. Section 102(e) because the May 31, 2000 priority date must be “before the *invention* by the applicant” (emphasis added). As set forth in the Affidavit/Declaration of Julie A. Campbell (dated March 6, 2002, a copy of which is enclosed herewith without attachments), Ms. Campbell has “witnessed conceptual drawings and descriptions relating to the present invention . . . dated at least as early as November 1999.” The invention was before that date. Because the May 31, 2000 priority date is not before the invention of the present application, the Nightingale ‘000 reference is not prior art under 35 U.S.C. Section 102(e).

35 U.S.C. Section 103

Claims 1-19 were rejected under 35 U.S.C. Section 103(a) as being unpatentable over U.S. Patent No. 6,826,826 to Nightingale (the "Nightingale '826 reference") in view of U.S. Patent No. 5,136,237 to Smith et al. (the "Smith reference").

Nightingale '826 Reference

The Nightingale '826 reference is directed to a measurement probe having an internal alignment fixture. Applicants would like to note that they reserve the right to contest whether this reference could be considered "prior art" either under Section 102 and/or Section 103. For purposes of this response only, applicants have chosen to address the substance of Nightingale '826 reference.

The Nightingale '826 reference includes a probing tip 12 which the Examiner equates with the claimed electrical contact mechanism. Applicants would like to point out that the Nightingale '826 probing tip 12 is in fact a hollow socket that couples with a switchable and replaceable probing tips such as those discussed in the Background of the Invention of applicants' specification. Applicants would like to note that they reserve the right to contest the characterization of the Nightingale '826 probing tip 12 as an electrical contact mechanism, but for purposes of this response only, applicants have chosen to adopt this characterization.

First, applicants would like to point out that probing tip 12 would not be a minimally inductive electrical contact mechanism. There is simply too much metal for the probing tip 12 to be considered minimally inductive. Changing the design of probing tip 12 by reducing the metal would make it unsuitable for its intended purpose of coupling with switchable and replaceable probing tips.

Second, based on the interpretation of probing tip 12 functioning as the claimed electrical contact mechanism, the Examiner clearly sets forth that the Nightingale '826 reference does not disclose a probing tip cartridge, a probing tip, or that the electrical contact mechanism contacts a conductive surface of the probing tip

cartridge. The Examiner seems to suggest that the use of a probing tip cartridge is suggested by the statement that "the probing tip 12 accepts a variety of probing adapters (not shown) for electrically connecting the probing tip 12 to a device under test." Applicants strongly disagree with the Examiner's implication that the term "adapters" teaches or suggests the claimed elements, or would lead one to look to references such as the Smith reference to find alternative devices.

#### Smith Reference

The Smith reference is directed to a double insulated floating high voltage test probe with a removable adapter. The Examiner seems to have trouble deciding which parts of the Smith device to equate with the claimed elements of the invention. For example, at first the Examiner equates probing tip 94 with the claimed probing tip. When discussing claim 4, however, the Examiner equates the probe tip 30 with the claimed probing tip. Another example is the Examiner's initial equating of the probe tip 30 with the claimed electrical contact mechanism. When discussing claims 5 and 6, however, the Examiner equates the jack 88 with the claimed electrical contact mechanism.

Part of this confusion is directly related to the fact that the Smith reference is not truly analogous to the claimed invention. For example, the probe tip 30 is not truly equivalent to the claimed electrical contact mechanism, but is really a probe tip 30 with an alternative use. In fact, the Smith electrical contact mechanism is a pliant connection means that is shown as a small rectangle between the substrate 34 and the base of the probe tip 30. Another example of confusion is that although Smith uses the term "probing tip 94" to describe a central pin of the removable adapter 62, the Smith probing tip 94 could not be used to probe the tiny features of a circuit board.

Even if the Smith probe tip 30 is considered an electrical contact mechanism, it is not a "minimally inductive electrical contact mechanism." The probe tip shown and described in the Smith reference would have too much metal and provide too much inductance to function as a minimally inductive electrical contact mechanism.

Changing the design of probing tip 12 by reducing the metal would make it unsuitable for its intended purpose of coupling with switchable and replaceable probing tips.

Further, the Smith probe tip 30 as mentioned above, the Smith reference is not a "directly electrically coupled" to the electronics. The Smith reference includes a pliant connection means between the substrate 34 and the base of the probe tip 30. Accordingly, if the probe tip 30 is considered to be the electrical contact mechanism, it would not be "directly electrically coupled" to the electronics.

Finally, the Smith device is not suitable for high bandwidth applications because the Smith probe tip 30 has a high inductance.

#### Lack of Teaching to Combine

Applicants also would like to point out that the Examiner did not mention that there was any teaching or suggestion to combine the Nightingale '826 and Smith references. Further, applicants have not found any such teaching or suggestion. Indeed, it is only through hindsight that the Nightingale '826 and Smith references would be combined. Applicant would like to state that the basic requirements of a *prima facie* case of obviousness require that there must be some suggestion or motivation, either in the references themselves or in knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings (MPEP 2143). The proposed modification, however, cannot render the prior art unsatisfactory for its intended purpose (MPEP 2143.01) and/or cannot change the principle of operation of a reference (MPEP 2143.01).

#### Claims

Applicants believe that the discussion of the references above as well as their arguments submitted in previous communications adequately distinguish the claimed invention from the known prior art. For purposes of expediting allowance of this application, applicants have amended the claims, but reserve the right to continue to

pursue the original versions of the claims as they believe those versions to contain allowable subject matter.

Claim 1 specifically calls out that the electrical contact mechanism is "a minimally inductive electrical contact mechanism" and that it is "directly electrically coupled" to the electronics. The Nightingale '826 and Smith references' structures that the Examiner equates with the claimed structure has too much metal and provide too much inductance to function as a minimally inductive electrical contact mechanism. Claim 1 also specifically calls out that the "cartridge system is suitable for high bandwidth applications." Because the Nightingale '826 and Smith references' structures have high inductance, they would not be suitable for high bandwidth applications. Applicants respectfully submit that claim 1, and the claims depending from claim 1, are not obviated by the Nightingale '826 alone or in combination with the Smith reference and should be allowed.

For the sake of brevity, applicants have chosen not to address all the claims dependent on claim 1, but specifically reserve the right to do so in future communications. These claims are allowable for the same reasons as set forth above for claim 1.

Regarding claim 4, as mentioned above, when discussing this claim the Examiner equates the probe tip 30 with the claimed probing tip. This is inconsistent with the basic premise of his argument. To make this argument even remotely consistent, the Examiner would have to show that Smith's probing tip 94 is "a socket for receiving other probing tips." There is no teaching or suggestion for this.

Regarding claims 5 and 6, as mentioned above, when discussing these claims the Examiner equates the jack 88 with the claimed electrical contact mechanism. This is inconsistent with the basic premise of his argument. To make this argument even remotely consistent, the Examiner would have to show that Smith's probe tip 30 is "a signal spring contact" or "a leaf spring." There is no teaching or suggestion for this.

Regarding claim 7, applicants were unable to find any disclosure in the Smith reference that the probing tip cartridge is an integrated grabber cartridge. The Examiner's equation that the adapter 62 is an integrated grabber cartridge is confusing.

Applicants would like to call the Examiner's attention to FIGS. 6-9 that show an integrated grabber cartridge.

Regarding claim 8, applicants would like to point out that the Smith reference does not have a main probing head body having a set of gripping jaws. Element 60 of the Smith reference, which the Examiner equates with gripping jaws, are notches that provide means for electrically connecting an outer conductor 64 of the removable adapter 62 to the conductive tube 36. (Column 5, lines 24-27.) Element 74 (the spring biased fingers, as opposed to the sleeve 72), which the Examiner equates with the gripping surfaces, engages the notch 60 to make electrical contact with conductive tube 36 of the probe 10. (Column 5, lines 33-38.) There is no teaching that the Smith notches 60 are "gripped" by the spring biased fingers 74.

Regarding claims 9 and 10, the Examiner equates the claimed probing tip cartridge with the Smith insulating plug 32. This is inconsistent with the basic premise of his argument in which he equates the claimed probing tip cartridge with the adapter 62.

As the Examiner did not specifically address claims 11-15, applicants likewise will point out that claim 11 is allowable for the same reasons as claim 1 is allowable and claims 12-15 are allowable for the same reasons as the claims having corresponding subject matter. Claim 11 has been amended to specifically call out that the electrical contact mechanism is "a minimally inductive electrical contact mechanism," that the "electrical contact mechanism directly electrically coupled," and "testing a high bandwidth signal." Applicants respectfully submit that claim 11, and the claims depending from claim 11, are not obviated by the Nightingale '826 alone or in combination with the Smith reference and should be allowed. For the sake of brevity, applicants have chosen not to address all the claims dependent on claim 11, but specifically reserve the right to do so in future communications.

Claim 16 specifically calls out that the electrical contact mechanism is "a minimally inductive electrical contact mechanism." Applicants respectfully submit that claim 16, and the claims depending from claim 16, are not obviated by the Nightingale '826 alone or in combination with the Smith reference and should be allowed.

New claim 20 specifically calls out that the electrical contact mechanism is "a minimally inductive electrical contact mechanism." Claim 20 also specifically calls out that the probing tip cartridge is "held in place by said at least one foot extending into said main probing head body." Applicants respectfully submit that claim 20 is not obviated by the Nightingale '826 alone or in combination with the Smith reference and should be allowed.

#### CONCLUDING REMARKS

As the application is now in a condition for allowance, the Examiner is requested to pass the application on promptly to issue.

Please charge Deposit Account No. 50-2115 for any additional fees which may be required.

Respectfully submitted,



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